

## CLAIMS

1. A power transmission comprising:
  - a transmission housing comprising a front end wall, a rear end wall, and a gear housing joining said front end wall and said rear end wall and cooperating therewith to define a gear space;
  - 5           an input shaft rotatably supported in said front end wall;
  - an output shaft rotatably supported in said rear end wall;
  - a planetary gear arrangement having first, second, and third planetary gearsets with each planetary gearset having a sun gear member, a ring gear member, and a planet carrier member, said sun gear member of
  - 10       said second planetary gearset being continuously connected with said input shaft for co-rotation therewith, said ring gear member of said first planetary gearset and said planet carrier member of said third planetary gearset being continuously connected with said output shaft for co-rotation therewith, said planet carrier member of said first planetary gearset and said ring gear
  - 15       member of said second planetary gearset being continuously interconnected, and said planet carrier member of said second planetary gearset and said ring gear member of said third planetary gearset being continuously interconnected;
  - a first torque-transmitting mechanism having a servomechanism
  - 20       with a fluid-operated piston supported on said front end wall and being operable to selectively interconnect said input shaft with said sun gear member of said first planetary gearset;
  - a second torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably supported in a first
  - 25       chamber formed in said front end wall and being selectively operable to connect said sun gear member of said first planetary gearset with said transmission housing;

a third torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably supported in a second chamber formed in said front end wall and being selectively operable to connect said planet carrier member of said first planetary gearset with said transmission housing;

a fourth torque-transmitting mechanism having a servomechanism disposed in an axial space between said first planetary gearset and said second planetary gearset and having a fluid-operated piston slidably disposed in a housing rotatable with said input shaft and being operable to selectively connect said input shaft with said planet carrier member of said first planetary gearset; and

a fifth torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably disposed in a chamber formed in said rear end wall and being operable to selectively connected said sun gear member of said third planetary gearset with said transmission housing.

## 2. A power transmission comprising:

a transmission housing comprising a front end wall, a rear end wall, and a gear housing joining said front end wall and said rear end wall and cooperating therewith to define a gear space;

an input shaft rotatably supported in said front end wall;

an output shaft rotatably supported in said rear end wall;

a planetary gear arrangement having first, second, and third planetary gearsets with each planetary gearset having a sun gear member, a ring gear member, and a planet carrier member, said sun gear member of said second planetary gearset being continuously connected with said input shaft for co-rotation therewith, said ring gear member of said first planetary gearset and said planet carrier member of said third planetary gearset being continuously connected with said output shaft for co-rotation therewith, said planet carrier member of said first planetary gearset and said ring gear member of said second planetary gearset being continuously interconnected,

and said planet carrier member of said second planetary gearset and said ring gear member of said third planetary gearset being continuously interconnected;

20 a first torque-transmitting mechanism having a servomechanism with a fluid-operated piston supported in a housing disposed on either said front end wall or between said front end wall and said first planetary gearset or between said first and second planetary gearsets and being operable to selectively interconnect said input shaft with said sun gear member of said first planetary gearset;

25 a second torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably supported in a first chamber formed on either said front end wall or said gear housing and being selectively operable to connect said sun gear member of said first planetary gearset with said transmission housing;

30 a third torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably supported in a second chamber formed on either said front end wall or said gear housing and being selectively operable to connect said planet carrier member of said first planetary gearset with said transmission housing;

35 a fourth torque-transmitting mechanism having a servomechanism disposed in either an axial space between said first planetary gearset and said second planetary gearset or between said front end wall and said first planetary gearset and having a fluid-operated piston slidably disposed in a housing rotatable with said input shaft and being operable to selectively  
40 connect said input shaft with said planet carrier member of said first planetary gearset; and

a fifth torque-transmitting mechanism having a servomechanism with a fluid-operated piston slidably disposed in a chamber formed in said rear end wall and being operable to selectively connected said sun gear  
45 member of said third planetary gearset with said transmission housing.

3. The power transmission defined in Claim 2 further comprising:

said servomechanisms of said first and fourth torque-transmitting mechanisms having the respective fluid-operated pistons thereof substantially coaxially aligned and said servomechanisms of said second and third torque-transmitting mechanisms having that respective fluid-operated pistons thereof substantially coaxially aligned.

4. The power transmission defined in Claim 2 further comprising:

said servomechanisms of said first and second torque-transmitting mechanisms having the respective fluid-operated pistons thereof substantially coaxially aligned.

5. The power transmission defined in Claim 2 further comprising:

said servomechanisms of said first and fourth torque-transmitting mechanisms having the respective fluid-operated pistons thereon substantially radially aligned, and said servomechanisms of said second and third torque-transmitting mechanisms having the respective fluid-operated pistons thereof radially stacked and supported on said front end wall.

6. The power transmission defined in Claim 2 further comprising:

said servomechanisms of said second and third torque-transmitting mechanisms having the respective fluid-operated pistons thereof substantially coaxially aligned.